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PATENT TRADEMARK OFFICE

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Case No.: 48317US022#15
B. Webb
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: JAPUNTICH, DANIEL A.
Application No.: 09/678579 Group Art Unit: 3761
Filed: October 3, 2000 Examiner: Aaron J. Lewis
Title: FIBROUS FILTRATION FACE MASK HAVING A NEW
UNIDIRECTIONAL FLUID VALVE

RESPONSE

Commissioner for Patents
Washington, DC 20231

CERTIFICATE OF TRANSMISSION	
To Fax No.: 703-872-9303	
I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office on:	
March 28, 2003	
Date	Signed by: Susan M. Dacko

Dear Sir:

Applicants submit this response in reply to the Office Action mailed December 31, 2002. Applicants respectfully dissent from a number of positions taken by the Examiner in the Office Action. Each of the positions that the applicants disagree with are reproduced below, followed by a rebuttal argument.

1. Office Action at page 8, paragraph 5

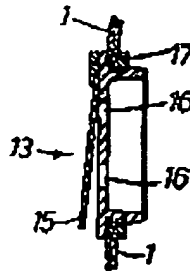
"Applicant's arguments hinge on speculation of a possibility that valve flap (15) of Simpson et al. might "droop" away from the valve seat. There is no support in the disclosure of Simpson et al. which forms a basis for such a position."

Applicants' Response:

Applicants disagree that there is no support in Simpson for having the flap droop away from the seal surface. It is apparent from the Simpson valve that there is no preload or bias that is placed on the flap:

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**Fig. 2.**

As the Simpson valve shows, the flap-retaining surfaces is in direct alignment with the seal surface and there is no instrument that causes the flap to be pressed towards the seal surface. Therefore, if the flap is inverted, gravity will act upon flap 15 to force it downward. The valve flap, if made from a conventional material, will then droop away from the seal surface. Simpson indicates that its valve can leak in the paragraph set forth on page 1, lines 58-64 in the specification:

To prevent inhalation of harmful atmosphere owing to leakage of the or each valve, the valve may be provided with an antechamber so arranged that, if the valve does leak in operation, the wearer inhales previously exhaled breath and not the harmful atmosphere.

Further, Simpson places the valve 12 on the top portion of the filtering face piece. In this position, the valve can take advantage of gravity to encourage the flap 15 to remain pressed against the seal surface when a wearer is neither inhaling nor exhaling. If a wearer tips their head downward, however, the advantage of gravity would be lost, and the flap could then droop away from the seal surface. Previously submitted Affidavits of Dave Castiglione (Exhibit A) and of John Bowers (Exhibit B) both support the position that Simpson's valve could allow for the influx of contaminants because the flap is not pressed against the seal surface when a neutral position. For ease of reference, applicants have reproduced paragraph 9 of the Castiglione Affidavit:

9. That I do not agree with the position taken by the Examiner at the bottom of page 3 of the Office Action. My review of the '516 UK patent application leads me to the conclusion that the valve 13 shown in Figure 2 does not have its flap 15 pressed towards the seal surface in an abutting relationship when the wearer is neither inhaling or exhaling. The '516 application reveals two distinctly different valves: a flap valve 13 as shown in Figure 2; and a diaphragm valve 14 as shown in Figure 3. These flaps have distinctly different constructions and operate differently. The valve shown in Figure 2 has a flat seal surface. The mounting of

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the flap 15 to the seal surface at the top or fixed portion of the flap does not show a preload on the flap 15. There is nothing that can be discerned from Figure 2 or from the specification that would indicate that the flap is pressed towards the seal surface in its neutral position. And because Figure 3 shows a flap 18 resting upon the seal surface in the flap's neutral position while Figure 2 shows the flap 15 dangling away from the seal surface in an apparent neutral position also, it can be concluded that the valve 13 of Figure 2 would only become pressed against the seal surface during an inhalation. A review of the '516 UK application thus leads me to believe that the valve shown in Figure 2 is a unidirectional exhalation valve that prevents the influx of contaminants through the exhalation valve during an inhalation when it is most needed. It is not apparent to me that the valve would be pressed towards the seal surface under a neutral condition when the wearer is neither inhaling nor exhaling.

Applicants have also reproduced paragraphs 15 and 16 of the Bowers' Declaration:

15. My review of the Simpson document reveals a flapper-style valve 13 in Fig. 2, which would not have its "flexible circular flap member 15" pressed against the valve's seal surface when a wearer of the mask is neither inhaling nor exhaling. The aligned relationship between the flap retaining surface and the seal surface and their relative positioning would not cause Simpson's flap 15 to be pressed against the valve's seal surface. At best the flap 15 would rest flush against the seal surface as a result of its securement at the flap retaining surface. The Simpson valve 13 therefore could allow for the influx of contaminants into the mask interior when, for example, a wearer tilts their head downwards and allows gravity to draw the flap away from the seal surface.

16. The Simpson product also has the valve located on the upper portion 1 of the pouch-shaped mask. This has the disadvantage that the warm moist exhaled air may be directed towards the eyes, causing misting of the eyewear. And Simpson's Fig. 2 valve cannot be positioned on the underside of the mask because the flap 15 would droop away from contact with the valve seat, causing the valve to leak.

As this testimony reveals, there is no mechanical means for having Simpson's flap 15 pressed against the seal surface. The Bowers' Declaration, in particular, states how the flap could droop away from the seal surface. The Examiner is reminded that it is improper for him to substitute his judgment for that of an expert in the field.¹ The Manual of Patent Examining Procedure explains:

¹ See, *In re Zeidler*, 215 USPQ 490 (CCPA 1982) ("Although perception of color may, in essence, be a 'subjective' determination, we believe that an expert's evaluation in this field is entitled to more weight than that of a layman. *In re Neave*, 54 CCPA 999, 1007, 370 F.2d 961, 968, 152 USPQ 274, 279-80 (1967). Therefore, because the qualifications of Lach and the test procedures which he employed are unchallenged, the board's holding that 'a more dramatic difference in results' is required constitutes reversible error, the board having erroneously substituted its judgment for that of an established expert in the art."); *In re Fay*, 146 USPQ 47 (CCPA 1965) ("It seems to us that one as well qualified in the highly technical art of fluoride-containing halogenated compounds as Henne is shown to be is properly entitled to express his expert opinion, and that such an opinion is entitled to be given consideration

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Evidence traversing rejections must be considered by the Examiner whenever present. All entered affidavits, declarations, and other evidence traversing rejections are acknowledged and commented upon by the examiner in the next succeeding action.... Where the evidence is insufficient to overcome the rejection, the examiner must specifically explain why the evidence is insufficient. General statements such as 'the declaration lacks technical validity' or 'the evidence is not commensurate with the scope of the claims' without an explanation supporting such findings are insufficient.²

It is legal error to ignore an expert's interpretation of a reference in favor of opinion.

2. Office Action at page 9, 1st full paragraph

"Applicant is reminded that the language of each of claims 33 and 63 requires only that the valve be pressed towards the seal surface in an abutting relationship therewith when a fluid is not passing through the orifice."

Applicants' Response:

Applicants respectfully assert that this is not a proper construction of applicants' claim. Applicants' claim requires that the flap be "pressed towards the seal surface in an abutting relationship therewith, *under any orientation of the valve*, when no external forces from the movement of fluid are exerted upon the flap". Simpson's valve does not show a flap 15 that can be pressed towards the seal surface under any orientation of the valve when no external forces from the movement of fluid are exerted upon the flap.

3. Office Action at page 9, 2nd full paragraph

"The Castiglione Affidavit is based upon the stated assertion (e.g. page 2, paragraph #9) that the valve flap (15) is not pressed into abutting relationship with the valve seat when a wearer is neither inhaling nor exhaling. While such may be the case, there is no objective evidence (e.g. a physical test of the mask disclosed by Simpson et al.) to support such a conclusion. Consequently, the affidavit is not persuasive."

with the other evidence in the case in determining whether the conclusion of obviousness is supported by the opinion of the examiner as to what the prior art teaches. For the reasons previously stated we do not think the prior art teachings furnish factual support for the examiner's opinion."); *see also In re Alton*, 37 USPQ2d 1578 (Fed. Cir. 1996) ("We do, however, hold that the examiner's final rejection and Answer contained two errors; (1) viewing the Wall declaration as opinion evidence addressing a question of law rather than a question of fact; and (2) the summary dismissal of the declaration, without an adequate explanation of why the declaration failed to rebut the Board's *prima facie* case of inadequate description.").

² MANUAL OF PATENT EXAMINING Procedure § 2144.03, 2100-129 (August 2001).

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Applicants' Response:

Applicants submit that the Examiner has erred in requiring that a physical test be carried out. There is no need for a physical test when an expert can readily ascertain the structural and functional relationship between the flap and the valve seat by viewing the drawings and reading the description. Further, the burden is not upon applicants to produce a physical test when the record firmly establishes that Simpson's flap is not pressed towards the seal surface under any orientation of the valve. Even without the testimony of Castiglione and Bowers, it is apparent, from simply looking at Figure 2, that Simpson's flexible flap is not positioned on the flap seat such that it is pressed towards the seal surface in an abutting relationship with it under any orientation of the valve. Consequently, the affidavits could more properly be characterized as being "overkill" rather than being "not persuasive".

4. Office Action at page 9, last paragraph

"Applicant's arguments regarding the propriety of the combination of prior art to Simpson et al. and McKim are disagreed with. Inasmuch as the valve flap of McKim lifts from the valve seat responsive to the pressure of the fluid passing therethrough and reseats due to its resilience, it does exhibit flexibility."

Applicants' Response:

It is true that the McKim flap does exhibit "flexibility" under another construction of this term. Applicants, however, have not defined the term "flexible" to be so broad as to encompass shim stock that does not bend in response to the force of gravity or a wearer's exhalate. McKim may illustrate in its figs. 1 and 3 that its valve reed can be bent, but this bending is done in response to a strong mechanical force. Any interpretation of McKim that would have its valve reed 14 qualify as a "flexible flap" would either be the result of an incorrect reading of the scope and content of McKim or an overbroad unreasonable interpretation of the term "flexible flap". The record shows that McKim's valve reed 14 "of sheet material, such as, for example, shim stock" would not be able to bend in response to gravity or breath from a person. Unless the Examiner can supply the record with evidence to demonstrate otherwise, it would appear that the Examiner is giving an unreasonable interpretation of the meaning of the term "flexible flap".

Although the definition set forth on p. 7, lines 22-25 does not explicitly use the word "gravity" in defining "flexible", it is clear, however, from the specification, the supporting

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Figures, and the prosecution history, that no other definition is intended by applicants. Accordingly, to eliminate any issue that might possibly exist in this regard, the Examiner is granted the full authority to make explicit what is otherwise implicit by amending the definition, as follows, using an Examiner's amendment: "the flap can deform or bend in the form of a self-supporting arc when secured at one end as a cantilever, exposed to gravity, and viewed from a side elevation (see FIG. 6).

5. Office Action in paragraph bridging pages 9 and 10, 3rd sentence

"Applicant's arguments alleging that one of ordinary skill would not consult reed valves for high speed engines may be accurate; however, the fact that McKim teaches the mounting of a valve flap in a curved orientation for the expressed purpose of increasing the efficiency of the seal between the valve flap and valve seat is seen as relevant information to one of ordinary skill in the creation of a more efficient seal between a valve and seat in any environment including the environment of valves in the respiratory arts."

Applicants' Response:

McKim improves the efficiency of the seal by eliminating float or bounce, which occurs when a 2-cycle gasoline engine operates at high rpms. The record clearly establishes that the float or bounce is not a problem that is encountered in the field of exhalation valves for filtering face masks.

6. Office Action in paragraph bridging pages 10 and 11

"The Bowers, Fabin and Betts Affidavits have been considered but are not persuasive for the following reasons: Applicants' argument that McKim constitutes nonanalogous art because it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, it is submitted that one of ordinary skill would look to the art of valves (which includes McKim ('618)) to address problems associated with the effectiveness of valve seating of a valve element which is used for controlling the direction of flow of breathable air through such a valve. McKim clearly addresses the problem of effectiveness of valve seating by non-aligning the flap retaining surface and the

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seal surface relative to each other thereby providing effective seating without float or bounce after each opening (col. 1, lines 64-72)."

Applicants' Response:

Applicants respectfully assert that the Examiner is incorrect in finding the facts and is incorrect in applying the law. Firstly, the record does not reflect any evidence of a desire to provide "effective seating without float or bounce after each opening" of an exhalation valve. As applicants have demonstrated repeatedly during this prosecution, this position is merely a statement of his opinion, wholly unsupported by any evidence of record. Nowhere does the record show that "float or bounce" is a problem that needs to be overcome in the exhalation valve art. In fact, the evidence of record establishes the exact opposite: it shows that "float or bounce" is not a problem that needs to be dealt with by persons who design exhalation valves. Secondly, the second part of the two-part test for determining whether a reference is analogous does not look only at the purpose of the device described in the cited reference. The test looks at the purposes of both the claimed invention and the device described in the prior art document, and it compares these two purposes.³ The Examiner has not examined both purposes and has not made such a comparison. The Examiner therefore has committed legal error by only examining the purpose of McKim.

In the leading case that deals with "analogousness" under part (2) of the test, the Federal Circuit has explained that the USPTO needs to consider the purposes of the reference disclosure *and* the invention in determining whether a reference is reasonably pertinent to the particular problem that confronted the inventor.⁴ In *In re Clay*, the Federal Circuit found the cited reference to be not analogous when (1) the prior art taught the use of a gel within a natural, underground, oil-bearing formation to channel flow in a desired direction and (2) the applicant, Clay, had invented the use of a gel to fill the confined dead volume of a man-made storage tank. Although the inventor Clay and the prior art (Sydansk) both described technology that related to

³ Because the Examiner does not dispute the fact that McKim does not reside in applicants' field of endeavor, we only need to evaluate McKim under part (2) of the test.

⁴ *In re Clay*, 23 USPQ2d 1058, 1061 (Fed. Cir. 1992) ("A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem. Thus, the purposes of both the invention and the prior art are important in determining whether the reference is reasonably pertinent to the problem the invention attempts to solve. If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, and that fact supports use of that reference in an obviousness rejection. An inventor may well have been motivated to consider the reference when making his invention. If it is

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the use of gels in the petroleum industry, *the prior art Sydansk reference was found to be nonanalogous because the purpose of the Sydansk teachings were different from the purpose of the Clay invention*. Sydansk was faced with the problem of recovering oil from rock, which was not pertinent to the problem with which Clay was involved, namely, preventing loss of stored product in a tank's dead volume. The court also recognized that the subterranean formation of Sydansk was not structurally similar to and did not operate under the same temperature and pressure and did not function like Clay's storage tanks.⁵

As in *In re Clay*, the McKim reference also does not have the same purpose as applicants' invention, it does not operate under the same temperature and pressure, and it does not function like the claimed invention. Float or bounce was a problem that occurred when 2-cycle engines operated at high rpms (10,000 to 12,000 rpms). It has not been a problem that occurs in exhalation valves, which open and close in cadence with a person's breathing, about 20 to 60 cycles per minute. In addition, internal combustion engines operate at extraordinarily higher temperatures and pressures than a person's exhalation breath and are not powered by a person's lungs but by gasoline combustion. Finally, McKim's valve is used for intake into a combustion cylinder while the present valve is used for exhaust from the interior gas space of a mask.

Applicants accordingly encourage the Examiner (and the Board if the rejection is still to be maintained) to carefully consider the *In re Clay* decision in light of the present rejection.⁶ A summary of the facts in *In re Clay* are provided below for ease of reference:

directed to a different purpose, the inventor would accordingly have had less motivation or occasion to consider it (emphasis added)"

⁵ See, *Clay*, 23 USPQ2d at 1601 ("Moreover, the subterranean formation of Sydansk is not structurally similar to, does not operate under the same temperature and pressure as, and does not function like Clay's storage tanks.").

⁶ See also, *SRI Int'l, Inc. v. Advanced Tech. Lab.*, 45 F.3d 443, 445 (Fed. Cir. 1995) ("The problem Green solved was how to compensate for changes in the spectral distribution of the return ultrasonic signal, with time or depth of penetration into a living organ, for enhanced image resolution and/or signal to noise ratio. The Minton reference, which relates to seismic prospecting circa 1946, almost thirty years prior to Green's filing date, would not have logically commended itself to Green's attention in considering how to compensate for changes in the spectral distribution of a received ultrasonic signal in an object such as a body part."); *In re Green*, 22 F.3d 1104, 1105 (Fed. Cir. 1994) ("A person of ordinary skill in the aircraft vane art simply would not find a 1919 reference about broken blades in a pugging mill reasonably pertinent to this problem."); *In re Butera*, 1 F.3d 1252, 1253, 28 USPQ2d 1399, 1400 (Fed. Cir. 1993) ("Butera's design is for air fresheners and insect repellents, while Hodge's is for metal ball anodes. The design of Hodge involves a different type of article from Butera's design and it is not analogous. One designing a combined insect repellent and air freshener would therefore not have reason to know of or look to a design for a metal ball anode. Since Hodge is not analogous, the Board clearly erred in finding Hodge to be citable as prior art. Therefore there was no basis for rejecting Butera's claimed design as obvious."); *Wang Laboratories, Inc. v. Toshiba Corp.*, 993 F.2d 858, 864, 26 USPQ2d 1767, 177_ (Fed. Cir. 1993) ("Wang's SIMMs were designed to provide compact computer memory with minimum size, low cost, easy repairability, and easy expandability. In contrast, the Allen-Bradley patent relates to a memory circuit for a larger, more costly industrial controller. SRAMs were used by Allen-Bradley because of their intended industrial environment. According to Dr. Frey, size was not a consideration in the Allen-Bradley work. Thus, there is substantial evidence in the record to support a finding that the Allen-Bradley prior art is not reasonably pertinent and is not analogous.").

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In re Clay		Result: reference <u>not</u> analogous				
	Description	Problem to be Solved	Purpose	Operating Conditions	Similarities	Differences
Clay	use of gel to displace liquid product from tank dead volume	preventing loss of stored product to tank dead volume	to displace liquid product from dead tank volume	<ul style="list-style-type: none">• subterranean rock• high temps (115°C) and bore pressures	both used in petroleum industry	different purposes and operating under different temperatures and pressures
Prior Art Sydansk	use of gel to fill anomalies in natural oil-bearing conditions	recovering oil from rock	to channel flow in a desired direction	<ul style="list-style-type: none">• made storage tank• ambient temp and pressure		
In re Japuntlich et al.		Result: not yet decided				
Applicants' Invention	use of a new flapper-style exhalation valve in a filtering face mask	keeping valve closed under any orientation while allowing low pressure drop during an exhalation	to allow valve to open easier during an exhalation but remain closed under neutral conditions	<ul style="list-style-type: none">• exhale valve on face mask body• body temperatures• low pressures• cadence of person's breathing	both relate to valves	different purposes and operating under different temperatures, pressures, and speeds
McKim	use of new reed intake valve in a two-stroke engine	stopping flutter or bounce of reed valve while operating under high RPM conditions	to eliminate float or bounce of valve reed to improve power and efficiency of engine	<ul style="list-style-type: none">• intake valve on 2-cycle engine• high temps• high pressure• high speeds (10-12,000 rpms)		

The Federal Circuit has stated that when the reference "is directed to a different purpose [than the applicants' invention], the inventor would accordingly have less motivation or occasion to consider it" and therefore it would not be analogous.⁷ Because the Examiner only considered the purpose of McKim's valve in evaluating whether it was analogous but did not consider the purpose of applicants' invention and compare it with McKim's purpose, the Examiner has erred in determining that McKim is analogous. This error, in turn, has caused the Section 103 rejection to be improperly maintained.

⁷ *Id.*

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7. Office Action at page 11, lines 3-5

"Applicants' argument that the valve of McKim lacks the required flexibility of applicant's invention is disagreed with because McKim (figs. 1 and 3) illustrates flexibility of the valve flap (14)."

Applicants' Response:

McKim may illustrate in its figs. 1 and 3 that its valve reed can be bent, but this illustration does not mean that the reed valve 14 in McKim qualifies as a "flexible flap" as that term would be reasonably interpreted by a person of ordinary skill consistent with a reading of applicants' specification. As explained above, any interpretation of McKim, which would have its valve reed 14 qualify as a flexible flap, would either be the result of an incorrect reading of the scope and content of McKim or an overbroad unreasonable interpretation of the term "flexible flap". The record shows that McKim's valve reed 14 "of sheet material, such as, for example, shim stock" would not be able to be bent in response to gravity from breath of a person. Unless the Examiner can supply the record with evidence to demonstrate otherwise, it would appear that the Examiner is giving unreasonable breadth to the meaning of "flexible flap".

In remark number 4 above, applicants have proposed an Examiner's Amendment that should put this issue to rest. If the Examiner does not wish to make such an amendment, then the claim term should nonetheless be interpreted in a reasonable manner consistent with the specification, which still would not read on McKim's shim stock reed valve.

8. Office Action at page 11, lines 5-7

"Further, the manner of bending illustrated in figs. 1 and 3 of McKim is consistent with appellants definition of a ...the flap can form or bend in the form of a self-supporting arc when secured at one end as a cantilever and view from a side elevation..."

Applicants' Response:

The manner of bending McKim's metal valve reed is not consistent with applicants' definition. As indicated above, applicants define flexible flaps that can deform or bend in response to gravity or pressure from a person's exhaled breath. McKim clearly uses a mechanical means to cause its valve reed 14 to be bent. The force that McKim uses, as described by Betts, is on orders of magnitude greater than the forces that are used to bend flexible flaps in exhalation valves. When the meaning of applicants' term "flexible flap" is given an interpretation that is not

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just the broadest construction possible but is instead the broadest *reasonable* interpretation, *consistent* with the specification, (and further when McKim's scope and content is properly interpreted, particularly in light of the Belts explanation), there can be no other conclusion other than that McKim's valve reed 14 would not qualify as a flexible flap.

9. Office Action at page 11, 2nd full paragraph

"Applicants' assertion that the record is devoid of any teaching, suggestion or motivation to combine the prior art to Simpson et al. and McKim is not accurate. As set forth in the body of the rejection, the reason for combination of Simpson et al. with McKim is because it would have provided for quick effective seating without float or bounce after each opening as taught by McKim (col. 1, lines 64-72)."

Applicants' Response:

This position confuses unsupported opinion with evidence. As applicants have stated on numerous occasions, persons skilled in the art of designing exhalation valve's do not search for solutions to eliminating float or bounce. Applicants have supported these statements with uncontroverted documentary evidence in the form of Affidavits and Declarations signed by persons skilled in the field of designing such valves. Because applicants have fully established that persons who design exhalation valves do not encounter — much less look for solutions to — "float or bounce" problems, the record lacks any motivating evidence for making the combination asserted in the present rejection. The record also is devoid of a single reference that states, either explicitly or implicitly, that exhalation valves exhibit float or bounce problems. Nonetheless, the Patent Office takes the position that a person skilled in the art of designing exhalation valves would have used the teachings of McKim's gasoline engine reed valve for purposes of eliminating float or bounce in an exhalation valve. The basis for maintaining the combination, therefore, has no evidentiary authority in the record, other than unsupported opinion.⁸ Bald conclusions like this, however, are not *evidence* that can be properly relied on to sustain a rejection based on a combination of references.⁹

⁸ "Unsupported" is probably not the best word to use in this sentence. The Examiner's view is not merely "unsupported"; it is actually "false". This falsity has been established by Bowers and Pabin when they unequivocally stated that float or bounce is not a problem that is confronted by persons who design exhalation valves.

⁹ See, *In re Dembiczuk*, 50 USPQ 1614, 1617 (Fed. Cir. 1999) ("Broad conclusory statements regarding the teachings of multiple references, standing alone, are not 'evidence.'"); See also, *Lee*, 61 USPQ2d at 1434 ("With respect to Lee's application, neither the examiner nor the Board adequately supported the selection and combination

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10. Office Action at paragraph bridging pages 11 and 12

"Applicants' assertion that Simpson et al. and McKim each present very good evidence of a lack of motivation to combine their respective teachings because no one of ordinary skill in the respirator art has made use of the teachings of McKim in making an exhalation valve is not accurate because examples of the use of the manner of mounting valves as taught by McKim do exist in the respirator art. The mounting of flapper valves in the respirator art by clamping a stationary portion of the flap in a different plane than the sealing surface (i.e. seat) resulting in a curved configuration which physically biases a free end of the valve to a closed position is well known (see fig. 3 of Simpson et al.). Another example is seen in the prior art to Matheson (cited but not applied) U.S. Patent 2,999,498, fig. 8 and col. 1, lines 38-46.

Applicants Response:

This position is inaccurate; the scope and content of the prior art have been mischaracterized. Simpson does not disclose a flapper valve in its fig. 3. Figure 3 describes a button-style valve. Additionally, the mounting surface in the fig. 3 valve resides in the same plane as the sealing surface. And the prior art to Matheson describes an inhalation valve, not an exhalation valve.

For the above reasons, applications believe that the prior art rejection based on Simpson and McKim should be withdrawn.

of the Nortrup and Thunderchopper references to render obvious that which Lee described. The examiner's conclusory statements that 'the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software' and that 'another motivation' would be that the automatic demonstration mode is user friendly and it functions as a 'tutorial' do not adequately address the issue of motivation to combine. The factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority.").

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Applicants have enclosed a Terminal Disclaimer to eliminate any issue with respect to double patenting.

Respectfully submitted,

March 28, 2003

Date

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